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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,620	03/28/2004	Gary R. Lennen	A-1455/Tank-229	2711

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EXAMINER	
VO, DON NGUYEN	

ART UNIT	PAPER NUMBER
2611	

MAIL DATE	DELIVERY MODE
06/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No.		Applicant(s)	
	10/811,620		LENNEN, GARY R.	
	Examiner		Art Unit	
	DON N. VO		2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-26, 28, 30 and 31 is/are rejected.
- 7) ☒ Claim(s) 10, 27 and 29 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/28/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-6, 8, 9, 11-15, 17, 18, 20, 21, 23, 24 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of "said incoming signal" recited in claim 3, lines 7-8 lacks antecedent basis. Similar problem exists for the same recitation recited at line 10 and claim 26, line 4 and lines 6-7.

The recitation of "s" recited in claim 3, line 13 is suggested to be deleted.

The recitation of "said stored digital samples" recited in claim 4, line 4 lacks antecedent basis.

The recitation of "said signal receiver" recited in claim 5, line 5 lacks antecedent basis.

The recitation of "said first memory and second memory" recited in claim 8, lines 3-4 lacks antecedent basis.

The recitation of claim 9 is confusing because it is depending from claim 8, which, when taking the combination of claims 8 and 9 into consideration there are many repeating steps.

The recitation of "said first memory" and "said second memory" recited in claim 11, lines 5 and 6, respectively, lacks antecedent basis.

The recitation of "said fist" recited in claim 12, line 11 lacks antecedent basis. Similar problem exists for the same recitation recited in claim 17, line 11; claim 20, line 14; and claim 23, line 13. They are suggested to change to – said first --.

The recitation of "said predetermined memory logging time period" recited in claim 13, line 5 lacks antecedent basis. Similar problem exists for the same recitation recited in claim 18, lines 5-6; claim 21, lines 6-7; and claim 24, lines 5-6.

In claim 14: the recitations of "said first memory block and said second memory block" recited at line 3; "said data transition algorithm" recited at line 6; "said carrier frequency estimation algorithm" recited at line 7; and "said code phase estimation algorithm" recited at lines 8-9 lack antecedent basis.

The dependency of claim 15 is an error because it is dependent from itself. It is suggested to change its dependency to claim 14 since it appears claim 15 is further limiting the recitation of claim 14.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 5, 7-9, 16-26, 28, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Harrison et al (US 6,151,353).

Regarding claims 1, 2, 4, 5, 7-9, 16-26, 28, 30 and 31, Harrison, as shown in figures 4-6, 11, 15, 17 and 19, teaches a method and apparatus for acquisition and tracking signal from satellite having low SNR comprising detecting and receiving (21) said signal, memory (33) for storing I and Q data, accumulator (30) and control (35) having algorithm for correcting carrier frequency offset, code phase offset and data misalignment. See also column 2, lines 23-64; column 6, lines 3-36; column 10, line 16 to column 12, line 67; column 13, line 49 to column 14, line 8 and column 18, line 24 to column 19, line 61.

Allowable Subject Matter

5. Claims 10, 27 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 3, 6 and 11-15 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References Abbott et al (US 6,516,021) and McLeod et al (US

7,221,696) are cited because they are pertinent to the method and apparatus for acquisition and tracking signal transmitted from satellite.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DON N. VO whose telephone number is (571) 272-3018. The examiner can normally be reached on Mon-Fri (9:00AM - 6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAY PATEL can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DON N. VO
Primary Examiner
Art Unit 2611